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TANG, KENNETH

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The time period for reply, if any, is set in the attached communication.

1	RECORD OF ORAL HEARING
2	UNITED STATES PATENT AND TRADEMARK OFFICE
3	_____
4	BEFORE THE BOARD OF PATENT APPEALS
5	AND INTERFERENCES
6	_____
7	*EX PARTE* NICK P. DIVITTORIO
8	_____
9	Appeal 2009-001000
10	Application 09/449,912
11	Technology Center 2100
12	_____
13	Oral Hearing Held: April 23, 2009
14	_____
15	Before LEE E. BARRETT, LANCE LEONARD BARRY, and STEPHEN
16	C. SIU, *Administrative Patent Judges*.
17	SIU, *Administrative Patent Judge*.
18	
19	APPEARANCES:
20	ON BEHALF OF THE APPELLANT:
21	MARK JOY, ESQUIRE (Via telephone)
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1   The above-entitled matter came on for oral hearing on Thursday,

2   April 23, 2009, at The U.S. Patent and Trademark Office, 600 Dulany Street,

3   Alexandria, Virginia, before Christine L. Loeser, Notary Public.

4

5   THE COURT: I have with me Lance Barry and Stephen Siu, the

6   other two administrative patent judges. You may proceed whenever you are

7   ready.

8   MR. JOY: Okay. As I said before,

9   honorable members of the Board, my name is Mark Joy and my registration

10   number is 35562. I represent the Applicant, Divittorio and the assignee,

11   Inventive Systems, Inc.

12   This is an appeal of U.S. application serial number 09/449,912, filed

13   on December 2nd, 1999, just to make sure we are talking about the same

14   application here.

15   In general, what I will initially do is describe the claimed invention

16   with reference to the drawings and then, just to make sure that we all

17   understand what the invention is and the general area that it pertains to, and

18   then I will briefly describe the teachings of Sinibaldi and, finally, I will

19   address points raised in our Briefs.

20   In general, I think that the Briefs map out the positions of both the

21   Applicants and the Patent Office so I'm not really sure that I'll be adding

22   much today but I certainly welcome any questions or requests for

23   clarifications.

24   In general, I believe that the combined teachings of Applicant's

25   submitted prior art in Sinibaldi do not teach all the elements of the

1   independent claims, nor does there appear to be a reason, that's the most

2   important thing I think, is there does not appear to be a reason to modify

3   Applicant's submitted prior art in view of Sinibaldi in a way that it would

4   render the claimed invention.

5   The first thing I just wanted to make sure, I don't know how familiar

6   you are with industrial process control systems and therefore, I was just

7   going to really quickly refer to figure 1A which shows the general

8   architecture of such systems.

9   They usually involve a workstation that is monitored by a human

10   being and runs various supervisory-level programs, including ones that can

11   view a monitored process and things like that.

12   And also, with regard to relevant previous embodiments of systems,

13   often the workstation was where they ran what's been referred to in claim 1

14   as the invented task, which is the one which generates the linear program

15   outputs that render set points.

16   Those set points are passed down to item 2 in figure 1A, which is a

17   control processor. Historically, such control processors really were tasked to

18   do one thing and that is run these things called function blocks or control

19   blocks. They ran them just as a set over and over again, cyclically.

20   That's considered the regulatory portion of an industrial process

21   control system. Typically, the workstation is supervisory, down to the

22   control processor, it's regulatory. In other words, it regulates the process

23   based upon set points that have been established by the supervisory portion

24   of the industrial process control system.

25   Having said that background, and getting into what the claimed

1   invention involves, I would like to direct your attention to figure 3. This

2   describes a particular embodiment of the claimed invention, and in

3   particular, I will map the claim elements to the figure 3. Independent claim

4   1 pertains to a control processor for executing a set of control tasks, a

5   dynamic model-based interactive control process.

6   The first element is, it mentions a control processor includes an

7   embedded control task comprising a multivariable linear program. That

8   would correspond to item 138, the application executing the model at a

9   lower priority.

10   Then the second element of this is the multivariable -- I'm sorry, the

11   function of that, as I mentioned, the multivariable linear program generates a

12   set of set points for a controlled industrial processor that optimizes operation

13   of an industrial process given a set of input values.

14   The other part of it is the set of control blocks that includes regulatory

15   control blocks having output values that are transmitted by the control

16   processor to field devices coupled to the industrial process. Those blocks

17   that correspond to the blocks that are identified as 136, which is the

18   multivariable controller block, the multivariable loop block, 132, and then

19   there's a set, a whole bunch of them actually that are considered regulatory

20   control blocks. That would be the input blocks at 124 and 126, 128, PID

21   blocks 130 and 134, output block 134.

22   So there's a division between, in accordance with the claim, between

23   an embedded task, which I have identified as 138, which runs in the

24   background at a lower priority and a set of control blocks which are running

25   in the foreground and at a relatively higher priority.

1   I will first ask, are there any questions about the meaning of the claim

2   after that? It probably came out just as easily from the description of the

3   invention in the application itself.

4   JUDGE BARRETT: No. That's fine.

5   MR. JOY: Okay. The other independent claims are very similar, and

6   I wasn't going to go into those. I think the time is better spent addressing

7   arguments because I think that it is pretty well explained in the specification.

8   The first thing I would like to do is – to address is the prior art and in

9   particular, Sinibaldi, that in my understanding, it discloses a wide area

10   network driver, including a process for distributing tasks to a set of DSPs

11   according to current calculated load on each of the set of DSPs.

12   Now, the disclosure of particular interest is with regard to figures 12

13   and 13 in the description at column 18, lines 25 through 28, which has been

14   referenced by the office actions. In particular, it's a reference to a matrix. A

15   point of disagreement that has arisen and kind of stayed throughout this

16   process is, our position is that the matrix is merely a table in Sinibaldi while

17   Applicants specifically recite and define a multivariable linear program.

18   That's one of the issues that we need to resolve on appeal here

19   because we certainly have a disagreement that we were unable to resolve.

20   Addressing the grounds for rejection, in particular with regard to

21   claim 1, there are two points that I want to raise today and one is that, as I

22   just mentioned, Sinibaldi does not disclose the linear program. Instead, it

23   discloses in the two figures that I mentioned, figures 12 and 13, and in the

24   referenced text from column 18, merely a table that lists tasks and their

25   associated processing load on selected DSP.

1   And then the second is I have actually gone into detail in my

2 responses, even assuming that there was a multivariable linear program

3 disclosed in Sinibaldi, the basis for combining Sinibaldi and the Applicant's

4 submitted prior art is incorrect. As I have noted before, the basis for the

5 Examiner's combining of the references was that it -- was that it enhances

6 the flexibility but in my opinion, it would actually reduce the flexibility

7 because if you look at the general, the historical role of a control processor,

8 it's to run those regulatory control blocks.

9   By adding another program on to it, you are putting additional load

10 on it, which could limit the scalability of the control processor, for instance.

11   As a result, it would result in – you would have to do a number of

12 things. You might have to reduce the size of the linear program and

13 alternatively, you might have to run your regulatory control blocks less

14 often.

15   So I don't agree that there's a benefit of increased flexibility that arises

16 from the teachings of Sinibaldi.

17   JUDGE BARRETT: Okay.

18   MR. JOY: With regard to -- those comments really apply to each of

19 the independent claims, too. I won't go into each of those separately.

20   The next point would be the rejection of claims, the group of claims

21 separately argued as 2, 3, 5, 14 and 17. And, in general, my general

22 argument was that this supervisory control blocks were never identified by

23 the Examiner in the responses and there's a description of supervisory

24 control blocks at, for instance, page 9, line 20 and page 11, line 27 of

25 Applicant's original specification.

1   The job of the supervisory control blocks is to act as -- those are

2   blocks, first of all, let me point out that those are blocks that are executed,

3   part of the control block scheme. So those are the ones that are run at a high

4   priority.

5   What the Inventors did when they designed the system is that they

6   incorporated supervisory functions into their high priority list of tasks.

7   Those were actually used to control the overall operation of the control

8   processor which now has additional tasks involved, downloading data from a

9   workstation that relates to the linear program, for instance. I don't believe

10   that element has ever been identified sufficiently in the prior art.

11   With regard to the rejection of claims 4 and 16, I really don't have

12   anything to add beyond what's already been written in the briefs so I really

13   won't -- I don't think it's necessary to go into the details. I really would just

14   be repeating what's been said already. The same is true with regard to claim

15   15 which is separately argued.

16   With regard to the rejection of claims 8, 11, 20 and 23, again, I stand

17   by the original arguments but also I just wanted to emphasize that the

18   repetition period that is being discussed is the embedded control tasks.

19   That's the lower-level task, as opposed to the function, the control blocks

20   that are executed, you know, the higher one.

21   There's two separate identified cycles that are associated with this

22   invention. One is the lower level and one is the higher. I don't know how to

23   say it, it's Messih, M-E-S-S-I-H, does not disclose the repetition period with

24   regard to the lower-level task.

25   I have nothing to add with regard to the rejection of claims 9 and 21,

1 other than what I had stated before.

2   With regard to the rejection of claims 12 and 24, I just wanted to add

3 that I couldn't find anything that even remotely applied to what was being

4 claimed in either of those two. If the Board finds that there's disclosure in

5 column 3, lines 20 through 34, then you are better readers than I am.

6   That's all I have to say today. If you have any questions, I welcome

7 them.

8   JUDGE BARRETT: Let me ask. Are there questions?

9   JUDGE SIU: No questions.

10   JUDGE BARRETT: Thank you. We understand your position.

11 Thank you very much.

12   MR. JOY: Thank you very much for your time.

13   (Whereupon, the proceeding was concluded on Thursday, April 23,

14 2009.)